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ABSTRACT

Addressed to young persons and adults, this booklet delineates the duties and rights applicable to bicyclists as drivers of vehicles. The following topics are discussed: Rules of the road, defensive bicycling techniques, the bicycle as a machine, registration and theft prevention, walking the bike, bike routes, and recreational and group rides. Diagrams and illustrations are included. (TA)

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AN OPERATOR'S GUIDE TO SAFE AND ENJOYABLE BICYCLING

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Prepared by the City of San Jose Department of Public Works

Bicycle Safety for Santa Clara County Project

An Office of Traffic Safety Project
State of California

This bicycle operator's guide has been prepared to help you enjoy bicycling by showing you the proper and safe way to use your bicycle. Since bicycling is no longer exclusively for children, this guide has been written for both young persons and adults.

The one basic rule that every bicyclist and motorist should remember is "Every person riding a bicycle upon a roadway has all of the rights and is subject to all of the duties and regulations applicable to the driver of a vehicle ... C.V.C. Section 21200." Unfortunately, many bicyclists are not licensed drivers and have not had the advantage of learning what the duties and rights of a vehicle are. It is hoped that this booklet will help to overcome this deficiency.

A. R. TURTURICI

As the number of bicyclists, motorists and pedestrians grows, it means every day more is required of those using our roadways. I urge all persons to study the contents of this *Operator's Guide to Safe and Enjoyable Bicycling* and to practice the safe procedures shown. If we do, bicycles will provide even more meaningful transportation for going to and from work, school, and shopping, and will help in controlling our environment and giving recreational and physical fitness benefits.

We sincerely hope you will repeatedly refer to this booklet to perfect your bicycle riding skills.

A. R. TURTURICI
Director of Public Works
City of San Jose

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NOTE: This handbook is furnished as a matter of service only and condenses or paraphrases the language of California Vehicle Code provisions and other city ordinances existing at the time this handbook was written. In a court, which is guided by the full and exact language of the law, it is not a proper legal authority to cite. No guarantee is given, and none should be inferred, covering the completeness, accuracy, or timeliness of any material covered herein.

CHAPTER I. RULES OF THE ROAD

THE BICYCLE: USE IT AS A VEHICLE

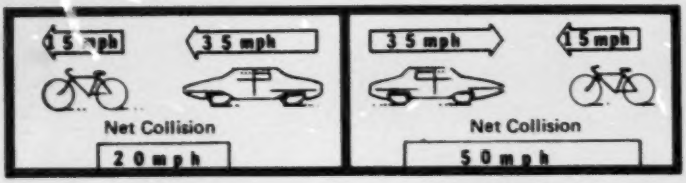
On city streets and highways a bicycle moves with other traffic which places it in the role of a vehicle. A bicyclist upon a roadway has almost all of the rights and is subject to almost all of the duties applicable to the driver of a vehicle (V.C. Sec. 21200). Before you use a bicycle on a public street or roadway, study and know the rules of the road. You are required to adhere to state laws and city ordinances. You are subject to their enforcement.

A. RULES OF THE ROAD

It is unlawful for any person to ride or operate a bicycle in violation of the rules of the road contained in the State Vehicle Code (V.C. Sec. 21200) and the City's Municipal Code.

RIDE *WITH*, NOT AGAINST, THE FLOW OF TRAFFIC –

Always ride as near the right-hand curb or edge of the roadway as possible, but be very careful when riding by a parked or standing car. It could pull out into your path, or a door could be carelessly opened.



DON'T WEAVE – RIDE IN A STRAIGHT LINE –

Before turning, check for bicycles or cars that may be ready to pass you (V.C. Sec. 21658). Signal to ANY other bicycle or vehicle that may be affected by your change in direction.

NIGHT DRIVING –

Night bicycle riding is extremely dangerous and should be avoided if at all possible. If you must ride at night, the law requires the following:

1. A white light visible from the front for a distance of 300 feet.
2. A red reflector on the rear visible under normal low beams of an approaching car for a distance of 300 feet. A red light may be substituted for the reflector if it is visible for a distance of 300 feet.

It is also a very good idea if you must ride at night to wear light-colored clothing and arm and/or leg lights. The arm or leg light is especially good because it moves with the body in contrary motion to the bike and therefore attracts attention.

DON'T FOLLOW TOO CLOSELY –

Always keep a safe distance from the bicycle or vehicle ahead (V.C. Sec. 21703). Following too closely, also known as "tailgating," is against the law.

OBEY THE BASIC SPEED LAW –

California's "Basic Speed Law" says that you must never ride faster than is safe (V.C. Sec. 22350). It means that, regardless of what a highway or road sign may say, you must think of all conditions that may affect your riding.

These include: the number and speed of other bicycles and cars on the road; the surface of the road – whether smooth or rough or graveled, wet or dry, wide or narrow; how far ahead you can see; also, persons walking

on the roadway; and such things as rain, fog, ice, wind and dust.

In business or residence districts of cities and towns, 25 miles per hour is the speed limit unless signs show other limits (V.C. Sec. 22352).

B. SIGNS, SIGNALS AND PAVEMENT MARKINGS

INTRODUCTION

Highway signs and traffic signals tell you where you are and what to do. They also give information which will help you to stay out of accidents and keep from making mistakes.

Bicycle riders must obey highway signs and signals, just as automobile drivers are required to do, so it is necessary for you to understand what they mean. The following sections illustrate and explain.

TRAFFIC SIGNAL LIGHTS

This is what the colors of traffic lights mean (V.C. Secs. 21451 to 21457, and 21802):

1. A **RED** light means **"STOP"** until the green appears.

   A **FLASHING RED** traffic light means exactly the same as a stop sign, namely, **"STOP!"** After stopping, proceed when safe, observing the right-of-way rules.

2. A **GREEN** light means **"GO"** but you must let any vehicles, bicycles or pedestrians remaining in the intersection when the light changes to green get through before you move ahead. Quickly look to be sure that all cross traffic has stopped before you enter the intersection.

3. A **YELLOW** light warns you that the red signal is about to appear. When you see the yellow light, you should stop your bicycle if you can do so safely. If you can't stop, look out for cars and bicycles that may enter the intersection when the light changes.

   A **FLASHING YELLOW** light is a warning of a hazard. Slow down and be especially alert.

4. A lighted **GREEN ARROW** by itself or along with a RED, GREEN or YELLOW light, means you may make the turn indicated by the green arrow. But give the right-of-way to pedestrians, bicycles and vehicles which are moving as permitted by the signal. The green arrow pointing left allows you to make a "protected" left turn; oncoming traffic is stopped by a red light as long as the green arrow is lighted.

   NOTE: U-turns are not permitted at intersections where traffic moves on the green light or green arrow signal, unless a sign states "U-turn OK."

5. **"WALK"** signals in green, and **"WAIT"** or **"DON'T WALK"** in red, direct *pedestrians only* at certain crosswalks. Pedestrians have the right-of-way while "WALK" is shown, except that they must yield to any bicycles or vehicles remaining in the intersection when the light changed. At some intersections the pedestrian signals are activated by a push button. Push the button and wait for the "WALK" signal.

(Road Signs are shown on pages 13 and 16.)

PAVEMENT MARKINGS

1. **SOLID DOUBLE LINE –**
   Such a double line, white or yellow, is a NO PASSING line and usually separates traffic moving in opposite directions. Never ride to the left of such a line unless a sign says it is OK. The line may be crossed, when safe, to make a U-turn or to enter or leave an alley or a driveway, for example, never to pass another bicycle or vehicle.
2. **TWO SOLID DOUBLE LINES (white or yellow) –**
   Not less than two feet apart. Such lines represent a solid barrier. Don't ride on or over such a strip. You may NOT make a left or U-turn across it. Cross only at plainly marked openings.
3. **LANE MARKED BY BROKEN YELLOW LINES –**
   This is a left turn lane, and may be used by bicycles or vehicles moving in either direction. Enter the lane only when preparing for or making a left turn. Get completely inside the lane. Slow down. Signal your left turn. Watch for oncoming vehicles. Never use a left turn lane for passing.
4. **MARKED BICYCLE LANE –**
   This is a bicycle lane and is not to be used by vehicles except for parking at times permitted. Be sure you check parking restrictions before entering lane. If you are a bicyclist and parking is permitted at the time, proceed cautiously, knowing you may have to maneuver around a parked car. Be aware at all times while using a bicycle lane, since service vehicles may be parked briefly. Motorists are not permitted to travel at any time in a bicycle lane except to park and for intersectional travel.

C. RIGHT-OF-WAY

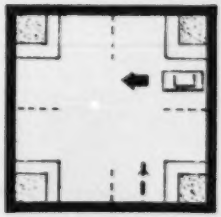
California right-of-way laws state who must wait for the other vehicle to go. It is a simple list of rules to determine whose turn it is to use the intersection. NEVER INSIST ON TAKING THE RIGHT-OF-WAY. Wait until it is given or YIELDED to you.

THE RIGHT-OF-WAY RULES ARE:

1. **INTERSECTIONS WITHOUT "STOP" OR "YIELD" SIGNS OR TRAFFIC SIGNALS –**
   If two persons (bicyclists and/or drivers) approach an uncontrolled intersection from *different* streets:
   - At the *same time*, the one on the left must yield the right-of-way to the one on the right.
   - At a *different time*, the first one in the intersection should be allowed to go ahead (V.C. Sec. 21800).

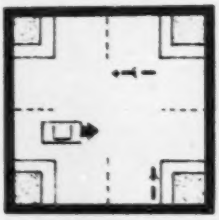
   If you are on a roadway and you see a bicycle or car crossing or beginning to cross it, slow down, prepare to stop, and let the bicycle or car go ahead.

SAME TIME RULE –
At all intersections without "STOP" or "YIELD" signs, yield to car or bicycle on your right if it has reached the intersection at the same time as your bicycle.



FIRST VEHICLE RULE –

At all intersections without "STOP" or "YIELD" signs, slow down and be prepared to stop. Yield to bicycles or cars already in intersection or coming close.

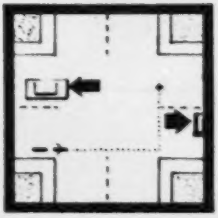


2. **LEFT TURN**

When you are going to turn left, give the right-of-way to all bicycles or cars coming from the opposite direction on the same roadway close enough to be dangerous. Do not turn in front of somebody and expect them to stop. Make your left turn only when you can see clearly that it is safe. On divided highways or highways with several lanes, look for bicycles or cars coming in all lanes you must cross (V.C. Sec. 21801).

LEFT TURN –

Signal left turn and yield to approaching traffic until it is completely safe to finish turn.

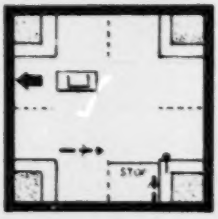


3. **CROSSING OR ENTERING**

If you are about to enter a highway or cross a highway from an alley, or a driveway, a parking lot, or similar place, you must yield the right-of-way to all vehicles and bicycles approaching on the highway (which includes the sidewalk) (V.C. Sec. 21804). Again, look carefully for all traffic in the areas you must cross.

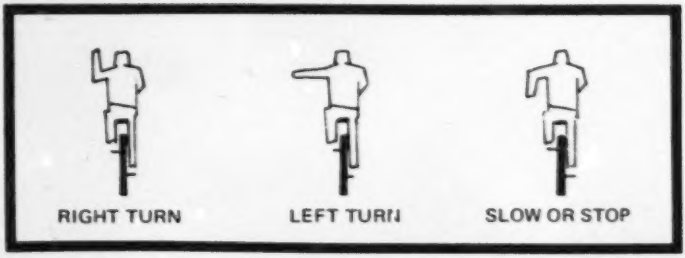
STOP STREETS –

Stop at any limit line or crosswalk. Yield to approaching cars or bicycles on through street. Go ahead when it is safe for you to cross.



D. TURNING AND SIGNALING

You must give a signal before you turn, or move right or left on a roadway if your movement affects any other traffic. Turn only when it is safe (V.C. Sec. 22107).



On right turns, stay in the right-hand lanes of both streets. Don't turn wide. On left turns, from other than a bicycle lane, you may move as close as practicable to the left-hand edge of the extreme left-hand lane or portion of the roadway lawfully available for your use to make the turn; avoid turning too soon and cutting the corner (V.C. Sec. 22100). However, it is suggested that the left-hand turn procedure described below be used instead.

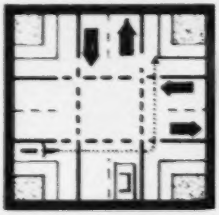
The diagrams show frequent turn situations. They are described as follows:

LEFT TURN

There are 3 ways to make a left turn. To determine which type of turn you should use consider the following:

- If there is a lot of traffic, it is probably best to make a turn like a pedestrian (as in 3.).
- In moderate traffic or in crossing major city streets, the two-stage turn (2.) is probably best.
- In light traffic, in residential areas, or in moderate traffic with directional islands, the automobile type left turn is OK but extreme caution must be used.

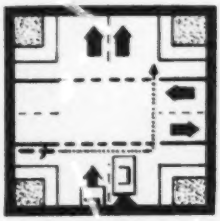
1. **LIKE A MOTOR VEHICLE**
   Move to left lane next to center line; stop at the stop bar, staying in that lane until it is safe to make the movement and then complete the turn.
2. **A TWO-STAGE TURN**
   The bike rider stays in the right lane and proceeds across the intersection and halts. When the light changes, he makes the second leg of the turn by proceeding in the direction intended.
3. **LIKE A PEDESTRIAN**
   Stops his bike at the corner. When the light changes, walks the bike across in the crosswalk. When the light changes (or when it is safe to do so, at a non-signalized intersection), completes the turning movement by walking the bike to the far curb. When it is safe, mounts the bike and continues riding.



WALK ACROSS

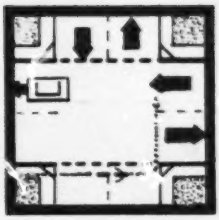
LEFT TURN –

From either a two-way into a one-way street or a one-way into a two-way street: Proceed to corner on opposite side, turn left close to the curb corners, or within a bicycle lane.

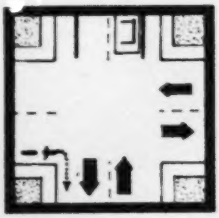


LEFT TURN –

From bicycle path (sidewalk) or intersection with left-hand storage lane which requires use of sidewalk at intersection: Follow bicycle path (lane) marking across the street, turn left at the curb.

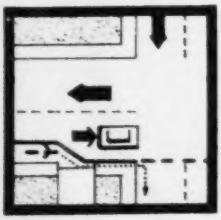


RIGHT TURN



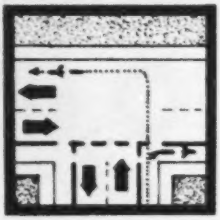
RIGHT TURN –

From the lane nearest the right-hand curb, the bicyclist completes the turn, remaining near the right-hand curb. You should not swing wide into a lane of traffic. Drivers must use maximum caution crossing a bicycle lane to be sure there are no bicycles proceeding straight through the intersection.



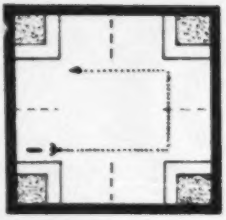
RIGHT TURN –

From bicycle path (sidewalk) or intersection with left-hand storage lane which requires use of sidewalk at intersection: If red signal, or stop sign, stop, then turn from curb ramp to light. Keep close to the right-hand curb.



TURN FROM A "T" INTERSECTION

Into a street: From the right-hand curb, proceed across the intersecting street and turn left close to the curb.



U-TURNS

You may make a U-turn, if made with reasonable safety and after giving the appropriate signal, under the following conditions:

1. At any intersection which is posted "U Turn OK."
2. In residential areas where there is 200 feet of visibility in all directions.
3. On a highway where you have 200 feet of visibility.

U-turns, when made by a bicyclist, should be made in the same manner as left turns. Under no circumstances should a U-turn be made on a one-way street.

E. PASSING AND BEING PASSED

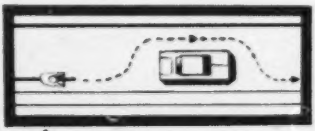
1. PARKED CARS

Be extra alert when approaching parked cars. If there is someone in the driver's seat, he may intend to pull out into traffic, or he may intend to open his door – possibly without looking. In either instance, be extra careful as you go by him, since he may do something unexpected.

2. PASSING A VEHICLE OR ANOTHER BICYCLE

Never pass until you are sure it is safe. Look to the side to which you plan to move. Signal to any bicyclist or driver behind you that you are going to change lanes. Pass only when it is safe, and NEVER by riding off the paved roadway (V.C. Sec. 21755). As a rule, pass on the left, ride well beyond the passed vehicle before returning to the right lane, and before you change lanes be sure to look and signal.

NEVER PASS ANOTHER VEHICLE BY CROSSING A DOUBLE YELLOW LINE!



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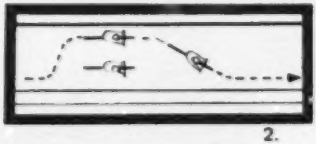


2.

3. **BEING PASSED BY A VEHICLE OR ANOTHER BICYCLE**
When someone on a bicycle or in a car passes you, you can increase the safety of his movement for both him and you.
   a. Move as far to the right of your lane as safety permits.
   b. Slow down a little when you see him pull out to pass.
   c. When he changes lanes in front of you, give him room – DON'T TAILGATE.

F. SIDEWALKS, CROSSWALKS AND CROSSING GUARDS

SIDEWALKS

1. **RIDING ON SIDEWALKS –**
As a general rule, in most cities bicycles can be ridden on sidewalks. To be sure, check with the police department of your community. Sidewalks may NOT be used, however, in the following areas unless they are marked as bicycle paths for your direction of travel:
   a. Business Districts,
   b. Pedestrian Overpasses, and
   c. Pedestrian Underpasses.
2. **PEDESTRIANS; CHILDREN –**
Whenever you ride on a sidewalk, remember to be very careful. The pedestrian has the right-of-way even if the sidewalk is a bicycle path. Look out particularly for small children on foot or on tricycles, bicycles, scooters, and the like; they are under a lower legal obligation to care for themselves.
3. **DIRECTION OF TRAVEL –**
Unless the sidewalk is marked as a one-way bicycle path, you can travel in either direction, but when you enter the roadway, make sure you travel with traffic, not against it. Be sure to check for signs, and always use extreme caution when entering the roadway from the sidewalk. Motorists do not expect bicycles to come out of driveways, particularly at a high rate of speed. So, BE CAREFUL.
4. **RIDE TO THE RIGHT –**
Ride to the right to avoid confusion with oncoming bicycles.
5. **SPEED –**
Maintain a fairly slow speed on sidewalks. Motorists crossing sidewalks will not be expecting bicyclists nearby and you would not have the right-of-way unless you were walking the bicycle (V.C. Sec. 21952). Also, children, animals, and adults are liable to step into your path unexpectedly.

CROSSWALKS

1. **PEDESTRIAN RIGHT-OF-WAY –**
Pedestrians have the right-of-way at marked crosswalks as well as all intersections (unless they are prohibited), whether or not there is a marked crosswalk (V.C. Sec. 21950). Otherwise, you have the right-of-way (except for blind persons), but you still *must* be careful when a pedestrian is on the roadway (V.C. Sec. 21954). It is a good idea to stop for a pedestrian at any time he appears to be attempting to cross unless stopping might endanger you or the pedestrian. Do NOT pass a car or bicycle from behind that has stopped for a pedestrian (V.C. Sec. 21951).

2. **RIDING IN CROSSWALKS –**

When you ride, you are *NOT* a pedestrian. *A bicyclist is NOT a pedestrian.* You do not have a pedestrian's right-of-way privileges in crosswalks – and should *not* expect to receive them. Since motorists expect only slower moving pedestrians to step into crosswalks, they may be unable to avoid hitting a bicyclist who zooms into them from the sidewalk. For safety reasons, dismount before you use a pedestrian crosswalk.

Be sure to push the pedestrian pushbutton at intersections with signals. Bicycles will sometimes activate sensors imbedded in the roadway, but not always.

CROSSING GUARDS

As a general rule, follow the directives of a crossing guard. Often they are present in a high risk area and their guidance should be followed.

G. SPECIAL SITUATIONS AND VEHICLES

1. **EMERGENCY VEHICLES**

When you hear the siren of a police car, fire engine, ambulance or other emergency vehicle, or when you see a vehicle with a lighted red emergency lamp coming from any direction, you must yield the right-of-way and move as close as possible to the far right side of the road, stopping until the vehicle has gone by. Don't stop in an intersection (V.C. Sec. 21806).

2. **SCHOOL BUSES**

When you come to a school bus with a flashing red light stopped on EITHER SIDE of the roadway, you must stop. Children may be crossing the roadway to or from the school bus. Remain stopped as long as the red light is flashing.

3. **BLIND PERSONS**

You must give the right-of-way to any pedestrian carrying a predominantly white cane or using a guide dog (V.C. Sec. 21963). Only blind or nearly blind persons are permitted to carry these canes (V.C. Sec. 21964).

4. **RAILROAD CROSSINGS**

At a railroad crossing, you must stop at least 15 feet from the nearest rail and must not proceed until you can do so safely, when (1) a clearly visible electric or mechanical signal device, or a flagman, warns you that a train is coming or passing, or (2) you can see a train coming, or hear its horn or bell, and it is dangerously close. Don't go through, around or under any closed railroad crossing gate (V.C. Sec. 22451). Don't go ahead until you can see clearly in both directions. There may be a second train coming from either direction.

Cross at right angles to the track itself. Otherwise, your bicycle wheels may fall into the track, and you may be thrown off.

H. OTHER RULES

You must obey state traffic laws and city and county traffic ordinances. You must also obey all official traffic signs, signals and markings (V.C. Secs. 21100, 21461, 40000). Ride *with*, not against, the flow of traffic. Aside from this being the law, there is a very practical reason for it, SAFETY.

Don't hitch rides on other vehicles (V.C. Sec. 21203).

Except for bicycles built for two and propelled by two, only one person may be on a bicycle when the bicycle is being ridden on a public right-of-way, except that an operator of a bicycle may carry, as a passenger on a bicycle, a child of not over the age of six years, upon a seat designed for carrying a child on a bicycle, which seat is permanently attached to the frame.

No one riding a bicycle on a public right-of-way should perform, or attempt, any acrobatic, fancy or stunt riding.

You have to sit on the regular seat when using your bicycle (V.C. Sec. 21204). Do not ride it unless the seat is properly adjusted.

Bicycle riding on playgrounds, in parks or on school grounds is allowed only on established paths or walkways unless permitted in other areas under rules and regulations established by the proper authorities.

Keep at least one hand on the handlebars at all times (V.C. Sec. 21205).

You may not operate a bicycle or a motor-driven cycle (any motorcycle, including every motor scooter, with a motor which produces less than 15 gross brake horsepower) on a freeway which has been posted with signs to prohibit such operation (V.C. Sec. 21960).

COMPLY WITH ORDERS OF POLICE, FIREMEN AND TRAFFIC OFFICERS.

Any traffic direction, order, or signal by a traffic or police officer or a fireman must be obeyed. In emergency or special situations, obey such an order even if it conflicts with existing signs, signals or laws (V.C. Secs. 2800, 2801, 21462).

You are subject to arrest if you ride or drive for sightseeing purposes to the scene of a fire, accident, or other disaster and by doing so interfere with the essential services of police, firemen, ambulance crews or other rescue or emergency personnel (Penal Code Sec. 402).

CHAPTER II. DEFENSIVE BICYCLING TECHNIQUES

INTRODUCTION

Regardless of how right you might be, it is of little consolation if you are *dead* right. As a bicyclist, there are certain things you can do to keep yourself out of dangerous situations. These techniques of staying out of trouble by scanning and thinking ahead are known as "Defensive Bicycling Techniques."

A. INTERSECTIONS

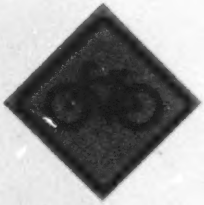
1. **HOW TO TURN LEFT AND LIVE –**
   In light traffic, turn from the far left lane, making sure you yield the right-of-way to oncoming vehicles, and turn only when it is safe. In moderate traffic, it is a good idea to make the two-stage left turn, by riding to the opposite side of the intersection, stopping, and, when the signal changes (or if it is an uncontrolled intersection, when it is clear and safe to do so), riding across the intersection and continuing on your way. In heavy traffic and at uncontrolled intersections, it is a good idea to make a left turn as a pedestrian – stop, get off the bike, walk it across both legs of the intersection, remount the bike and ride on.
   NEVER CUT ACROSS DIAGONALLY – NEVER CUT IN FRONT OF ANOTHER VEHICLE (ALWAYS YIELD THE RIGHT-OF-WAY).
2. **RIGHT-TURNING VEHICLES**
   When you approach an intersection on your bike, be alert for cars approaching from the rear who may intend to turn right. Often, the driver of the automobile will not see you, or will assume you are turning also. If the vehicle approaching from the rear intends to turn right, slow down, if necessary stop, and let the auto make its turn and then proceed when it is safe.
3. **DIRECTIONAL ISLANDS**
   In a situation where there are corner islands, a dangerous situation may be present. With the right lanes of such an intersection free running – not requiring a complete stop before turning right – the cyclist has a choice: either he can change lanes to the lane next to the farthest right-hand lane – one lane over – or he can stop at the stop bar in front of the crosswalk, dismount and cross as a pedestrian.
   ALWAYS YIELD TO AUTOS – IT'S BETTER THAN BEING DEAD RIGHT. LET THEM GO BY AND THEN PROCEED.
4. **ACTUATED SIGNALS**
   Many signals have a sensing device which tells the signal controller that someone is waiting to cross the intersection. Some of these sensors are sensitive enough to record a bicycle; however, most are not. If the signal time seems long, try pressing the pedestrian button for the direction you want to go. NEVER run a red light.

B. ROAD HAZARDS

1. **STORM SEWER GRATES**
   One of the prime road hazards to the bicyclist is the storm sewer grate. They are usually found in the gutter next to the curb, at or near corners, and often in the middle of a block. They usually look like the bars of a cage laid flat on the ground. Never try to ride over one – you may hook a tire and flip over. The bicyclist should ALWAYS be able to see where his tire is going and be alert to the "bicycle eating" storm sewer grate. Always "scan" the road ahead, so you can avoid hazards.

ROAD SIGNS

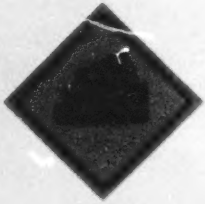
THESE SIGNS TELL YOU WHAT IS AHEAD



Bicycle Crossing

Divided Highway

Divided Highway Ends



Hill

Pedestrian Crossing

Two-Way Traffic

Lane Ends
Merge Left

School Zone

School Crossing

– A Typical Example of the Signing Used on Bike Routes –

(Road Signs continued on page 16.)

Palo Alto Routes
EXISTING BIKE ROUTES
IN
SANTA CLARA COUNTY
1973
0 1 2miles 3
NORTH

Riverside Routes
Mountain Parks Routes
CARLSON AVENUE
10

STOP SIGN

After you have come to a complete stop, look for cars and bicycles that are in the intersection or coming so closely that they may hit you. Let them pass before you enter the highway. On a highway with a divider, look for cars and bicycles coming on the other side of the divider before crossing it.

YIELD SIGN

You should slow down. Let closely approaching bicycles or vehicles go through the intersection; stop if you have to. Do not go ahead until it is safe to do so.

THESE SIGNS TELL YOU WHAT YOU CAN, AND CANNOT, DO

Merge

Bicycles

Keep Right

2. **RAILROAD CROSSINGS**

The second road hazard the bicyclist must be aware of is the railroad crossing. Cross at right angles to the track. Otherwise, your bicycle wheels may fall into the track, and you may be thrown off.

3. **ROAD SURFACE**

Always be aware of the road surface, stay on the paved portion and look out for chuck holes, broken glass and nails, rocks and wood debris. If you hit such hazards with your tire, you can damage the tire, the rim, or, what is worse, be thrown off your bike onto the pavement or into traffic. If you must ride at night, make sure your headlight illuminates the area of ground your tire will travel over.

C. OTHER HAZARDS

1. **FOLLOWING TOO CLOSELY**

Another hazard which is extremely dangerous is following too close to a vehicle or another bike. When you ride behind a vehicle, leave at least one car length for every ten miles per hour of speed. If you are following another bicyclist, never ride with your front wheel next to his rear wheel. Always signal your intentions well in advance and look to be sure it is clear before making any change in direction.

REMEMBER – NEVER TAILGATE.

CHAPTER III. THE BICYCLE AS A MACHINE

A. EQUIPMENT

1. REQUIRED

The law requires the following equipment (V.C. 21201):

a. No person shall operate a bicycle on a roadway unless it is equipped with a brake which will enable the operator to make one braked wheel skid on dry, level, clean pavement.

b. No person shall operate on the highway any bicycle equipped with handlebars so raised that the operator must elevate his hands above the level of his shoulders in order to grasp the normal steering grip area.

c. No person shall operate upon any highway a bicycle which has been modified or altered in such a way as to cause the pedal in its lowermost position to be more than 12 inches above the ground.

d. Every bicycle operated upon any highway during darkness shall be equipped with a lamp emitting a white light visible from a distance of 300 feet in front of the bicycle and with a red reflector on the rear, of a type approved by the department, which shall be visible from a distance of 300 feet to the rear. A lamp emitting a red light visible from 300 feet to the rear may be used in addition to the red reflector.

e. On and after January 1, 1972, no person shall sell a new bicycle or pedal for use on a bicycle that is not equipped with a reflector, of a type approved by the department, on each pedal of such bicycle which is visible from the front and rear of the bicycle during darkness from a distance of 200 feet.

f. On and after January 1, 1973, no person shall sell or offer for sale a new bicycle unless it is equipped on the rear with a red reflector of a type approved by the department, nor shall any person sell or offer for sale for use on a bicycle a red reflector that is not approved by the department.

g. On and after January 1, 1974, no person shall sell or offer for sale a new bicycle unless it is equipped with either:

   1) An amber reflector on each side forward of the center of the bicycle and a red reflector on each side to the rear of the center of the bicycle; or

   2) An amber reflector mounted on the outside end on each pedal of such bicycle.

   Such reflectors shall be visible from a distance of 500 feet to the side when directly in front of lawful lower beams on a motor vehicle and shall be of a type approved by the department.

h. On and after January 1, 1975, no person shall operate a bicycle upon any highway unless it is equipped with either:

   1) An amber reflector on each side forward of the center of the bicycle and a red reflector on each side to the rear of the center of the bicycle; or

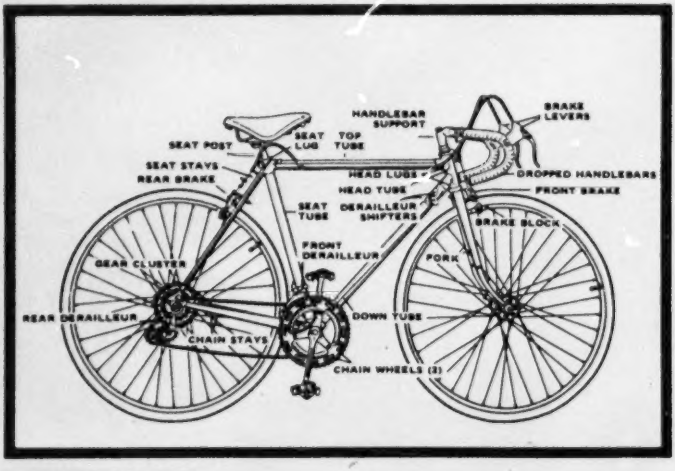
   2) An amber reflector mounted on the outside end on each pedal of such bicycle.

   Such reflectors shall be visible from a distance of 500 feet to the side when directly in front of lawful lower beams on a motor vehicle and shall be of a type approved by the department.

2. OPTIONAL – SUGGESTED

Additional equipment which may save your life:

a. A rack to hold packages – must be secured to the frame.
b. Additional reflectors, front, rear and sides.
c. A rear-view mirror.
d. Arm or leg lights for riding at night.
e. Hand grips or plugs which protect the rider.



B. MAINTENANCE

1. EVERYDAY CARE

a. Keep the bike clean.
b. Make sure all nuts are tight.
c. Things to check:

1) The Saddle
With the ball of the foot on the pedal while it is in the lowermost position, adjust the seat height so that the legs bend only slightly. Tighten the seat securely.

2) Brakes
You must be able to make one braked wheel skid on dry, level, clean pavement (V.C. Sec. 21201a).

3) Handlebars
With your hands on the grips, your hands cannot be above your shoulders. Be sure to keep the handlebars low enough to let you maneuver your bicycle in traffic (V.C. Sec. 21201e).

4) Pedals
Keep them oiled. Replace brake pedals. A new bicycle or pedal, when sold, has to be equipped by the manufacturer or dealer with approved reflectors on the pedals which are visible from the front and rear (V.C. Sec. 21201e).

5) Wheels and Spokes
Tighten wheels, replace broken spokes promptly. Keep wheels tight.

2. **PERIODIC MAINTENANCE**

a. Adjust chain to about 3/8 inch up and down movement.

b. Oil and lubricate all moving parts – clean and oil chain and wheel bearings, oil pedals and bearings in fork yoke.

c. Clean oil and dirt off painted and chrome surfaces.

d. Readjust seat to fit.

e. Tighten all nuts.

f. Check wheel for roundness – tighten loose spokes.

g. NEVER OIL BRAKE PADS OR WHEEL RIM ON HAND-TYPE BRAKE.

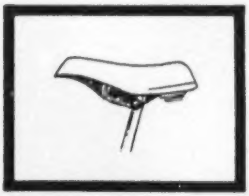
CARE AND MAINTENANCE

You should take good care of your bicycle . . . breakdowns cause accidents; besides, you can't ride when your bicycle is not operating. Proper care makes it last longer, and it will look better too. If you keep your bicycle in good condition, it will be easier to ride, and it will go faster with less work.

Here is what you must do to keep your bicycle in good condition. Younger boys and girls should ask their fathers or mothers to help them. If you have trouble, take it to the bicycle shop.

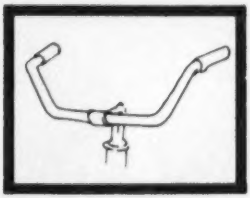
SEAT (SADDLE)

Adjust to proper height and tighten. The right height can be found by placing the instep of the foot on the pedal at the lowest point; knees should be slightly bent. The seat should be level with the ground.



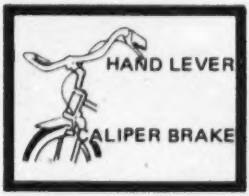
HANDLEBARS

Tighten securely; replace hand grips if necessary. Hand grips should be level with frame and a little higher than the seat. Make sure handle grips are cemented tightly.



HAND BRAKES

Keep sides of wheel rims free of dirt, oil and wax. Check bolts and nuts on caliper brake and hand level to make sure they are tight. Make sure brake pads are at equal distance from the wheel. When the brake shoes become worn or the control cables need adjusting, go to your bicycle shop.

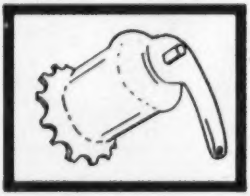


COASTER BRAKE

Too hard to clean, adjust, or repair at home. Take it to a bike shop.

ROUTINE MAINTENANCE:

If it has an oil hole, squirt one teaspoon of oil in once a month.



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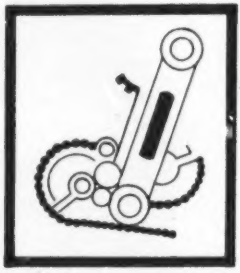
DERAILLEURS

Too hard to adjust or repair at home unless you have been specifically trained to do so. Take it to a bike shop.



ROUTINE MAINTENANCE:

Spray all moving parts with an oil distillate solution.

OPERATING TIPS:

Shift only while pedaling (although ease up slightly while pedaling to shift).

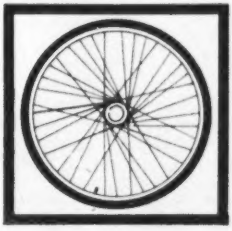
Pedaling backwards can damage shifting gears.

Forcing the shift lever will damage gears.

Laying your bike on the ground on the gear side will bend the gears or get them dirty.

Check cables for fraying.

WHEELS



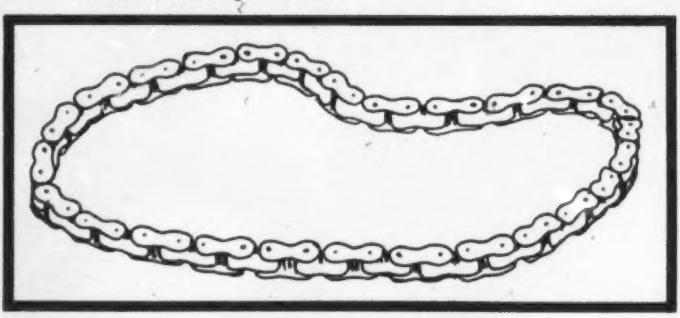
If spokes are loose or broken, or the tire is warped, take to a bike shop. Spokes should be checked periodically to make sure they are evenly taut. The best way to avoid wheel problems is not to ride over curbs.

TIRES

Check pressure with tire gauge every two weeks. The proper air pressure is shown on the side of the tire, or in the booklet that came with your bike. Check tire valves for leaks – you can do this with soapy water. Riding with low pressure will ruin your tires and rims.

CHAIN

Spray chain once a month with petroleum distillate (such as WD-40 or LPS-1). Chain should have approximately 3/8 inch play in the middle. If too tight or too loose, loosen rear wheel and slide it back and forth until there is the correct amount of play. Retighten rear wheel, but make sure the wheel is not rubbing the frame.



PEDALS

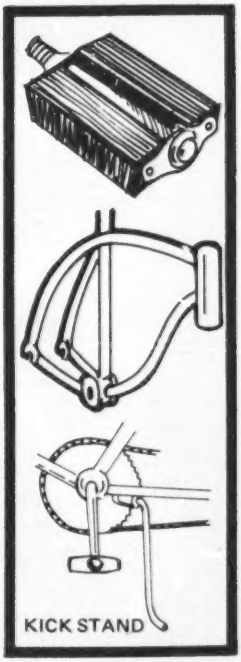
Oil the end next to the crank. Most pedals cannot be taken apart and repaired but you can buy new ones at your bicycle shop. If rubber is worn or has fallen off, **REPLACE.** Toe clips should be used with caution.

FRAME

Keep the frame clean, and be careful not to scratch the paint. Rub the chrome or nickel-plated parts with an oily rag to keep them from rusting. Use automobile cleaner and wax on the painted parts every three months.

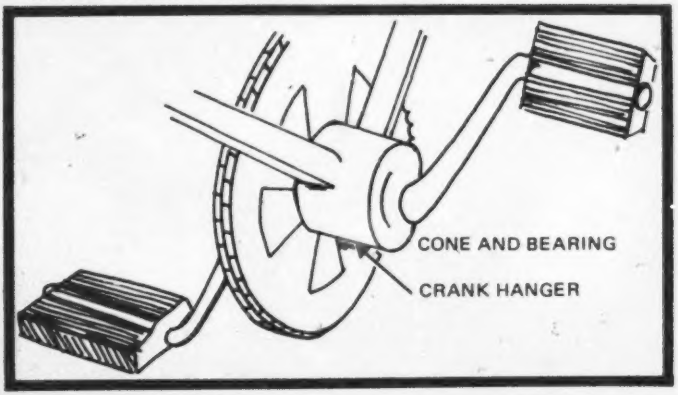
PARKING

Laying your bike down on the gear side, which is normally the right side of the bike, will bend the gears or get them dirty. It is best to park it in a rack, stand it in a safe place against a building, or use the kick stand.

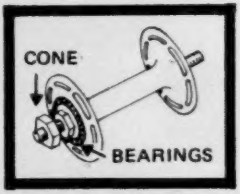


BEARINGS

Check bearings to see if they are too loose (wheel or crank will wobble) or too tight (movement of parts will bind). Maintenance should not be attempted unless it can be done extremely well. To repair, consult a bike repair manual. If there is any question regarding how well you can do the job, take it to a bike shop.



BEARINGS



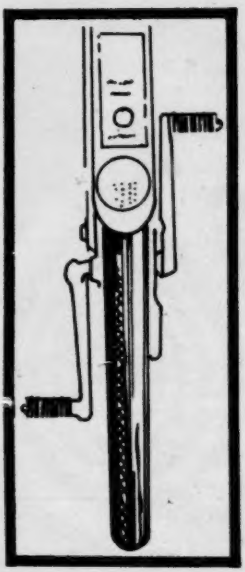
A LICENSE FOR YOUR BIKE

Bicycles don't need state license plates, like those you see on automobiles, but some towns and cities have ordinances which require a bicycle to have a license. An ordinance is like a law, except that it applies only to a local area instead of a state or country.

Local license plates are small and they are attached to the rear frame or fender. The license number, date and name of the city are stamped on the plate; sometimes decal stickers are used. This number is recorded at the police station, along with your name, address and bicycle frame number.

Bicycles should be inspected by a licensing agency before a license is issued. In many areas the fire department licenses bikes, but call first before taking your bike there.

Local ordinances also regulate the operation of bicycles. They tell you where you can ride or park, and what you must do. When you get your first bike, be sure to find out if your city has a bicycle ordinance. If so, get a copy from the police department.



CHAPTER IV.
REGISTRATION AND THEFT PREVENTION

A. REGISTRATION

The sure way of identifying a bicycle is by the serial number stamped on the frame. Very few owners know their serial numbers and must rely upon the Police Department to furnish this information. The police can do this if your bicycle is licensed. There is a much better chance your stolen or lost bicycle will be located if it is licensed.

B. THEFT PREVENTION AND TIPS

To avoid having your bicycle stolen:

1. License your bicycle.
2. Always chain your bicycle, even if you will be away from it for only "a few moments."
3. Put the chain through each wheel, the frame and the bicycle rack.
4. Be sure you use a good lock and hardened chain. Inexpensive locks have about the same effectiveness as no lock at all.
5. Report a missing bicycle as soon as possible. If it is found, the chances are it will be recovered within a day or two of its disappearance.
6. Visit the Bicycle Office at the Police Department to look for your bicycle among those turned in. Inquire as to when you can check since viewing hours are limited.
7. If you find your own bicycle after reporting it missing, contact the Police Department immediately.

CHAPTER V. WHEN YOU WALK YOUR BIKE

When you walk your bike you are in fact a pedestrian, subject to the same rights and duties.

At an approximately rectangular intersection a pedestrian crosswalk, even if not marked, is that portion of the pavement where the sidewalk lines would extend across the street unless signs indicate pedestrians may not cross.

When crossing or walking on a roadway at places which are not intersections or marked crosswalks (provided this is allowed by state law and local ordinances), you must yield the right-of-way to vehicles which are close enough to constitute an immediate hazard.

You must not suddenly leave a curb or other safe place and walk or run into the path of a vehicle which is close enough to be a danger to you (V.C. Secs. 21950 and 21954). This is true even though you are in a crosswalk and the law says that any driver must take care for the safety of any pedestrian. If the driver can't stop in time, the law won't help you.

Between adjacent intersections where a signal light or officer controls movement, you must cross only in crosswalks (V.C. Sec. 21955).

You must always obey traffic control signals (V.C. Secs. 21461, 21462). Where signals show the words "walk," "wait," or "don't walk," together with the usual signal lights for vehicles, you must obey the special signals (V.C. Sec. 21456.1).

When a signal first changes to green or "walk" for you, you must yield the right-of-way to any bicycle or vehicle which lawfully entered the intersection before the signal changed (V.C. Sec. 21451).

If the signal changes after you have gone part way across a street, you may proceed to a sidewalk, safety zone, or pedestrian island while the "wait" or "don't walk" signal is showing (V.C. Sec. 21456).

CHAPTER VI. BIKE ROUTES

A. LAWS AND RULES TO REMEMBER

1. YOU AND BICYCLE LANES, PATHS AND ROUTES

a. There are enough bicyclists and motorists in many cities to make it necessary to designate a portion of selected streets and roadways for the exclusive use of bicycles. By definition bicycle lanes have specific areas of the paved roadway surface reserved for bicyclists. Whenever possible, you should stay in the bike lane except when it would not be safe for you to do so.

b. Bicycle paths are areas separated from the paved roadway surfaces. Extra caution should be used when you merge into roadway traffic from a bike path.

c. Bicycle routes are streets where it has been determined it is safer to ride your bicycle. They are marked by signs but not pavement markings.

2. LANE MARKINGS – PARKING RESTRICTIONS

a. Each official bicycle lane is designated by appropriate pavement markings and pole signs. There are some intersections where the lane on the street becomes a path and goes onto the sidewalk. Follow the pavement markings and watch signs. Regular bicycle paths on sidewalks usually have no pavement markings.

b. LEARN the new bicycle traffic signs . . . they warn the motorist of greater bicycle traffic . . . they warn the bicyclist of heavy vehicular traffic.

c. As a motorist, whenever you see any of the markings which tell you there is a bicycle lane on the street where you wish to park, be sure to check when parking is permitted before leaving your car.

3. WHERE A BICYCLE LANE OR PATH IS DESIGNATED

a. Where a bicycle lane or path appropriate to a bicyclist's direction of travel is established, the bicyclist should ride in that lane or path (or on the sidewalk, where sidewalk riding is permitted).

b. A MOTORIST IS PROHIBITED FROM DRIVING ON A BICYCLE LANE OR PATH AT ANY TIME except to park where parking is allowed or for turns.

B. LOCATION OF EXISTING BIKE LANES

Refer to Map on pages 14 and 15.

CHAPTER VII. RECREATIONAL AND GROUP RIDES

A. RECREATIONAL RIDES

1. BIKE RIDES OR CLUBS

Recently, organized group rides have become very popular with students, particularly with the older Elementary and Junior High School levels. This activity is cost free and does not involve a great deal of pre-planning. However, the pre-planning and the student instruction that it does involve are extremely important to the success of the ride. This activity also provides the adult monitors who participate in the ride a chance to better understand some of the pleasures of bike riding and some of the dangers, as well as providing some good physical exercise.

Bike Clubs are simply clubs whose members plan and take organized bike rides on a regular basis. All student bike clubs should have parent or other adult sponsors and adult monitors for each and every ride that is taken. If parents find that they do not have sufficient time to become involved in organizing such a club, local bike clubs should be contacted to see if they would be interested in sponsoring a club in your school. If that is not possible, check to see what rides the local bike club has planned and if your students could participate in those rides. (Rides vary greatly in difficulty and length, and it may not be possible to have smaller children participate in those rides.)

B. GROUP RIDES

The following outline details how to organize a group ride and some of the things to look out for in terms of safety.

1. PRE-PLANNING

Special consideration must be given to:

a. Age of riders participating; the younger the riders, the more planning is needed.
b. Number that will participate in the ride.
c. Amount and type of adult supervision.
d. Types of bicycles that will be used.

2. PLANNING THE RIDE

Course Layout: A well-mapped course will insure that all participants have a safe and enjoyable ride.

a. The *most important* thing for the *leader* to do is to *ride* the course *prior* to the group ride, keeping an eye out for possible hazards.
b. The course should be set up according to:
    1) The type of bicycle that the majority will be using.
    2) The amount of time it will take the slowest rider (age of participants).
    3) Provide for rest stops (for filling stations, get permission).
c. Plan the ride during low volume traffic periods.
d. Remember, the average speed for a light weight bike with a young adult riding it is 7 mph.

3. ORGANIZING THE PARTICIPANTS

a. There should be a meeting of all participants, at which time:
   1) The requirements for the ride are presented.
   2) Registration information is passed out and explained.
   3) A list of necessary items should be passed out.
   4) A mechanical inspection of bikes should take place.
   5) Bike safety is discussed and any safety information is distributed.
   6) Distribute registration cards (necessitating parental permission) and have any medical waivers signed.

b. Stress the Safety Aspect.

c. Bicycle Inspection should cover the following:
   1) TIRES
      Check to see that adequate tread is apparent and there are no physical defects that may cause failure.
   2) CHAIN
      Make sure that the chain is properly lubricated and adjusted (too much "slack" will cause the chain to come off the sprocket under stress).
   3) SEAT
      Check to see that it is firmly attached and solidly placed in the post hole. (A good check is to pick the bicycle up by the seat.)
   4) HANDLE BARS
      Check to see that they are securely tightened by wedging the front wheel in a corner of a room and trying to turn the handle bars.
   5) WHEELS
      Check to make sure they are reasonably round so that they don't rub the frame.
   6) CHAIN GUARD
      If the bicycle has no chain guard the rider should obtain a "pants club" or rubber band to avoid injury to garments and/or rider.

d. Clothing
   1) Riders should wear light, easily visible clothing.
   2) Pants with large "flares" (large bell-bottoms) should be avoided.
   3) Light weight jackets (nylon) are advisable. Hats rather than scarfs.
   4) Light weight shoes with good socks are a definite advantage. No sandals or bare feet.

4. GROUP SAFETY

The following are group techniques that should be practiced by all:

a. Ride single file.
b. Avoid "overlapping" wheels (tailgating often results in this).
c. Do not make any sudden moves – especially stops – without signaling your intentions to those around you.
d. Try to leave at least one bike length between riders.
e. Point out such hazards as glass, dangerous grates, large rocks, rail road crossings, etc., so that those behind you will avoid them.
f. Obey traffic laws at all times.

g. Special mention should be made of how to cross rail road tracks and what to do if signal traffic light splits your group. Just because you are a group you cannot ignore yellow or red lights.

5. **RESPONSIBILITIES**

The leader assumes responsibility for the group:

a. A full knowledge of the route and any unsafe conditions is a must.

b. Ride in front of the group and establish the pace (keep in mind the slower riders).

c. Keep track of your party.

d. Intersections can be dangerous. A monitor should supervise the group through intersections.

e. Decide deviations (if any) from original route.

f. Assistant Leader – Responsibilities:

1) Ride in the rear – watching for:

a) Riders not following safety rules and endangering themselves and others.

b) Riders developing physical or mechanical problems.

g. Monitors – Ride Within the Group:

1) Assigned a specific number of riders to be directly responsible for.

2) One of the monitors should be able to perform minor repairs such as flat tires, loose bolts, etc.

3) Should be capable of remaining with the individual who can't go on. Never leave one member alone along the way.

6. **"SAG WAGON"**

If the ride is very long, it is a good idea to have a vehicle such as a truck accompany the group. A "sag wagon" will prove to be invaluable in the event of injury, major mechanical breakdown, or just plain inability to complete the ride.

Have riders carry telephone number of a central location in case of emergency and CARRY A WATER BOTTLE.

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